Electrolux RM-275 Absorption Refrigerator Refrigerator Igniter and Spark Electrode Replacement

This guide shows how to replace a faulty spark igniter module, spark electrode and igniter switch. Replacement parts were unavailable, but an igniter module from a more modern RM-6401 fridge was used successfully.

Written By: GrandadTom

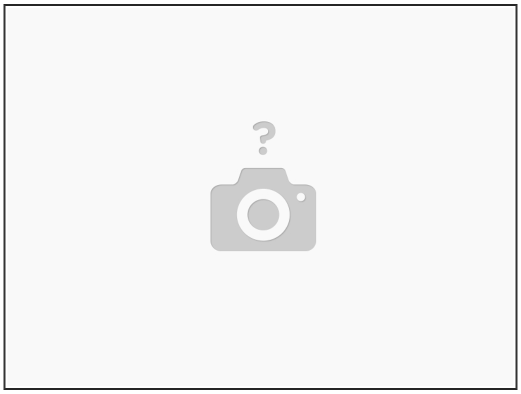
INTRODUCTION

The Electrolux RM-275 Refrigerator works by a process called absorption, rather than the compression process that powers a standard household fridge. Instead of a compressor, it has a small heater, about 100 watts. The heating power source is user-selectable: mains, vehicle battery or gas bottle. The absorption process is less efficient than compression, but is popular for RVs, and camping trailers because of the power source flexibility, and for hotel minibars because it is quiet. This fridge is in a 20-year-old RV. This type of fridge is now made by Dometic, who supply spares for some many old Electrolux-branded fridges - but unfortunately not for this one.

The fridge worked fine on mains power or vehicle power, but it didn't work on gas. To set it to gas, switch on the spark igniter, which sparks about twice a second, with an audible 'tick' and a flash of the switch lamp. Then turn the gas knob to 'full' and press the knob to override the flame failure thermocouple. After a few seconds the gas will flow from the jet and the spark will ignite the flame. The igniter module senses the low resistance through the flame, and automatically stops the sparking and lamp flashing. After half a minute the flame failure thermocouple will be hot, and you can stop pressing the knob.

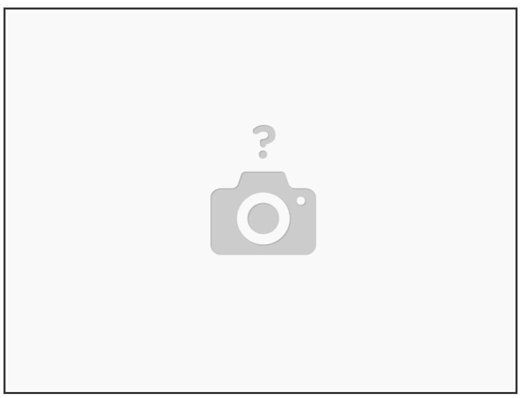
The problem with this fridge was when the igniter was switched on there was no flashing light, and no tick sound. Removing the covers round the gas jet (as described below) and lighting the gas with a match was successful, and confirmed that the gas supply was OK.

Step 1 — Gas igniter electronic spark module, spark electrode and igniter switch



⚠ Isolate mains supply.

Step 2



- Isolate the vehicle 12V supply.

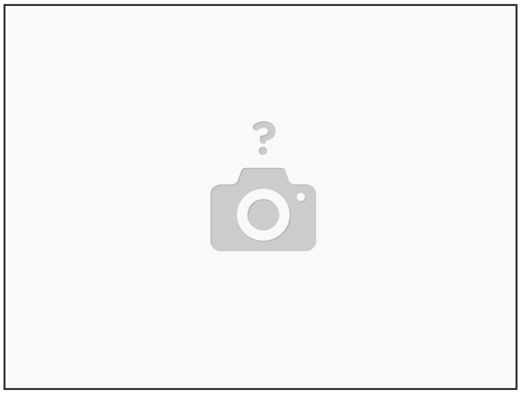
Step 3

- Isolate the gas supply

Step 4

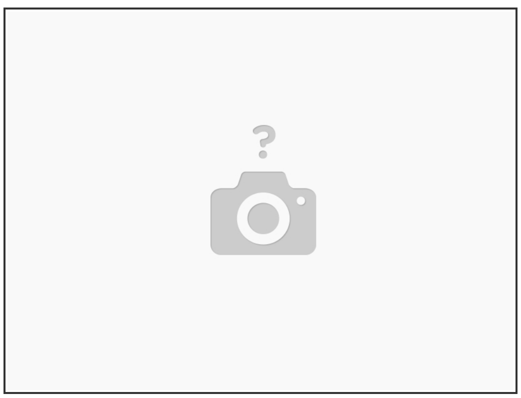
- Remove access panels to gain access to the rear of the fridge

Step 5



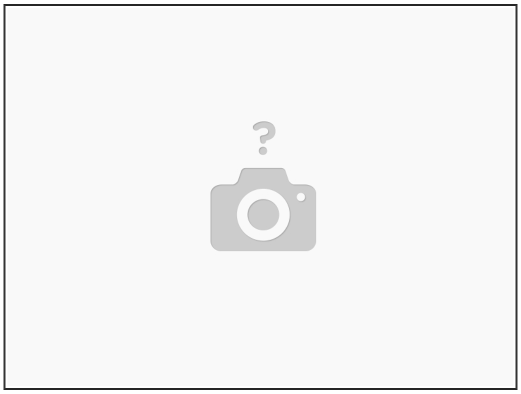
- Remove cover from spark igniter module

Step 6



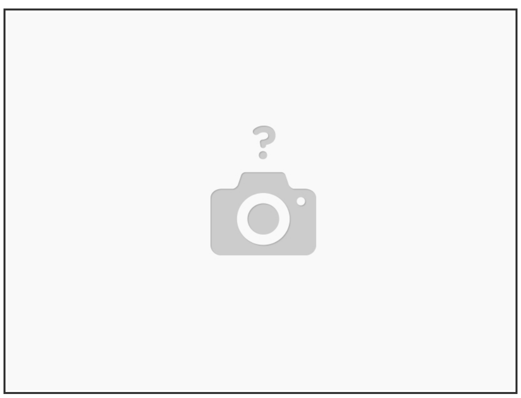
- Note the colour and position of the 4 wires to the igniter module (+, -, L and spark). Pull the wires from the spark igniter module terminals.

Step 7



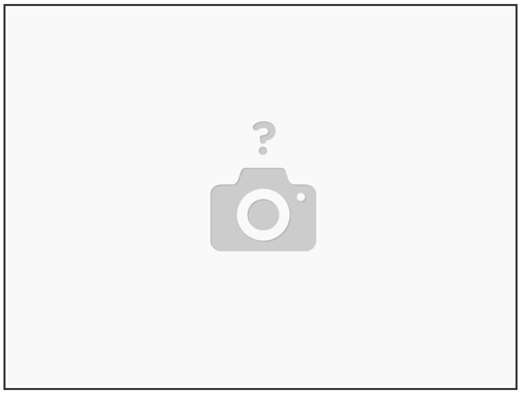
- Remove the two screws holding the igniter module to the back panel of the fridge, and remove the igniter module.

Step 8



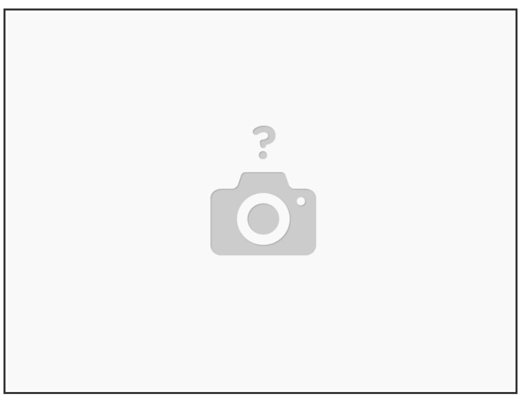
- If you wish to remove the spark electrode, remove the metal cover around the gas flame unit. To do this, slacken the screw holding the cover to the fridge rear panel. Also slacken the screw holding the two parts of the cover together. By careful manoevering you can remove the metal cover parts separately.

Step 9



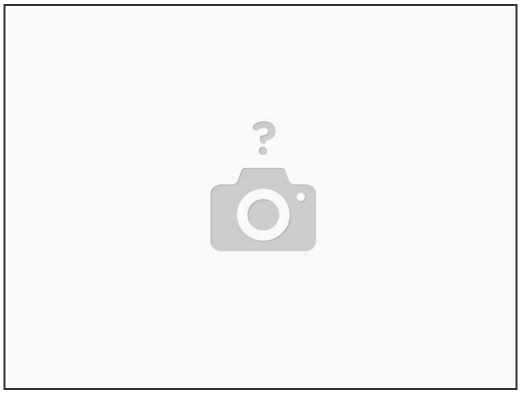
- Remember where the thermocouple and spark electrode are located relative to the gas jet. Then slacken the screw securing the clamp which holds the spark electrode and thermocouple. Remove the spark electrode.

Step 10



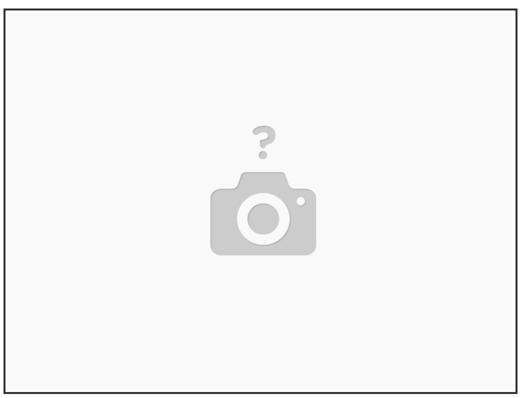
- Fit the replacement spark electrode, with tip pointing downwards, at the correct location as remembered from the previous step. The electrode tip should be 5mm (3/16 in) from the metal gas jet. Adjust the thermocouple to its previous position and tighten the screw to secure the clamp.The thermocouple tip should be in the gas flame.
- New line.

Step 11



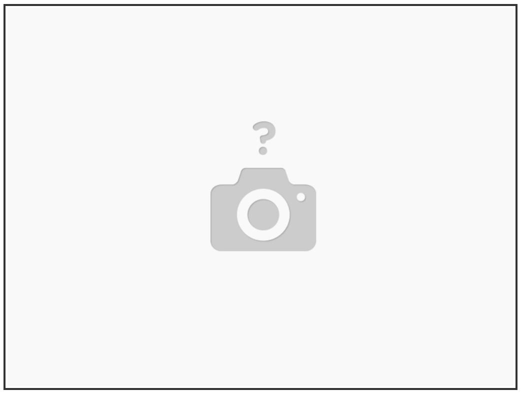
- Adjust the thermocouple to its original position and tighten the screw to secure the clamp.The thermocouple tip should be in the gas flame. Don't replace the gas jet covers at this stage - it is useful to see the spark when testing the new igniter module.

Step 12



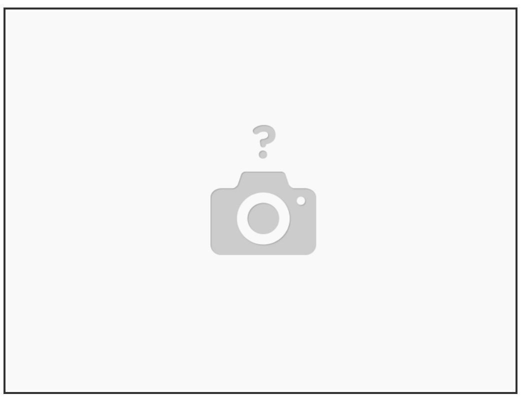
- Check if the old igniter cover will fit the replacement igniter module. It may be necessary to make a new cover. For the new igniter I used a small plastic box from a local electronics store (Maplin). Make a hole to pass the spark electrode wire, and a small cutout to allow the other 3 wires.

Step 13



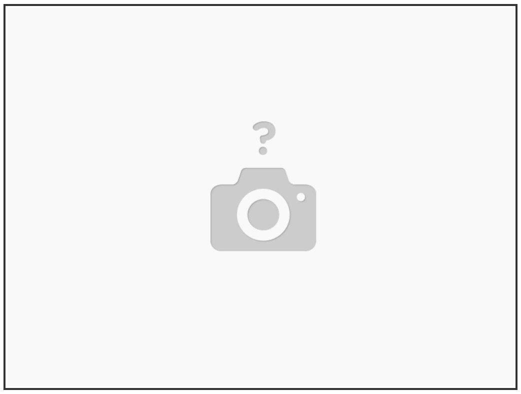
- Drill holes in the box for fixing the igniter to the box. Use countersunk screws recessed so they do not protrude outside the box. Secure the igniter to the box with the countersunk screws, washers and nuts

Step 14



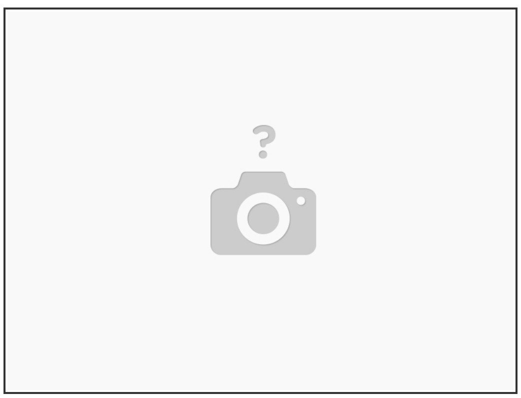
- Drill 2 holes in the box and secure the igniter and box assembly to the rear of the fridge as near as possible to the location of the old igniter module.

Step 15



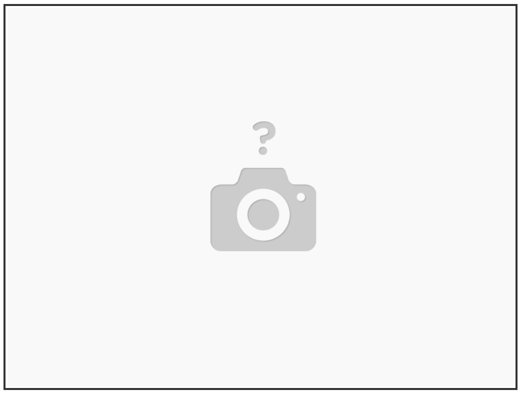
- Connect the + and - wires to the terminals marked + and - . Connect the L wire to the terminal marked GL. Connect the spark terminal to thes terminal marked with the spark symbol.

Step 16



- Fit the box lid using the 4 screws supplied with the box

Step 17



- Turn on the igniter switch and check the lamp flashes and the spark tick sound is audible.

To reassemble your device, follow these instructions in reverse order.

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